UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,607	12/29/1999	FRED OLIVEIRA	E0295/7136	2467

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EXAMINER
POLLACK, MELVIN H

ART UNIT	PAPER NUMBER
2152	2

DATE MAILED: 08/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _29 December 1999_ .

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-22_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-22_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _29 December 1999_ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

   If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

   a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *see attached office action* .

DETAILED ACTION

Drawings

1.   This application has been filed with informal drawings which are acceptable for

examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United
> States before the invention thereof by the applicant for patent, or on an international application by another who
> has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention
> thereof by the applicant for patent.

3.   Claims 1, 2, 4-6, 8, 9, 11-13, 15, 16, 18-20 and 22 are rejected under 35 U.S.C. 102(e) as

being anticipated by Kikinis (6,289,389).

4.   For claim 1, Kikinis teaches a method (see abstract) of processing an out of band control

command (col. 4, lines 61-64) executed by a host computer (Fig. 1, item 11) in a multi-path

system (col. 2, line 66 – col. 3, line 2), including the host computer (Fig. 1, item 11), a device

(Fig. 1, item 29) and multiple paths coupling the host computer to the device (Fig. 1, items 15

and 37), the out of band control command further identifying, from among the multiple paths, a

target path (col. 6, lines 19-22) for transmission of the out of band control command between the

host computer and the device (col. 6, lines 23-32), the method comprising steps of:

       a.   Selecting a selected path for transmitting out of band control command between

       the host computer and the device, the selected path being selected from among the

       multiple paths based upon a selection criteria that enables the selected path to be other

than the target path identified by the out of band control command (col. 6, lines 19-32);

and

b.   Transmitting the out of band control command between the host computer and the

device over the selected path (col. 4, lines 61-64).

5.   The definition of an out of band command is a command that runs over a different wire.

In this case, the data request runs over a landline but the data is transmitted over a satellite

communication signal. Therefore, the data request is an out of band command, and this

command is anticipated.

6.   As for claim 2, Kikinis also teaches that the device is a data storage system, wherein the

out of band control command requests access to information stored on the data storage system

(col. 4, lines 61-64), and wherein the transmission step includes a step of transmitting the

information between the host computer and the data storage system over the selected path (col. 2,

lines 54-65).

7.   As for claim 4, Kikinis teaches that the path selection step includes a step of selecting the

target path as the selected path when the target path is operational (col. 6, lines 19-32), and

selecting a different one of the multiple paths as the selected path when the target is non-

operational (col. 3, lines 10-13).

8.   As for claim 5, Kikinis teaches that the path selection step further includes a step of

automatically selecting the different one of the multiple paths when the target path is non-

operational, without intervention of a system administrator (col. 6, line 66 – col. 7, line 10).

9.   As for claim 6, Kikinis teaches that the path selection step includes a step of selecting the selected path based upon a selection algorithm that distributes, among the multiple paths a load of operations passing between the host computer and the device (col. 6, lines 19-32).

10.   Claims 8, 9, and 11-13 are drawn to a computer readable medium encoded with a program for execution on a host computer with similar limitations to those drawn in claims 1, 2, and 4-6, respectively. It is taught in the prior art that the software implementation of a method is functionally equivalent to the underlying method. Official notice is also taken regarding the fact that a program would be stored on a computer readable medium and executed on a computer. Therefore, if claims 1, 2, and 4-6 are rejected, then claims 8, 9, and 11-13 are rejected as well.

11.   Claims 15, 16, and 18-20 are drawn to a host computer that implements the method in claims 1, 2, and 4-6. Claim 15 also states the host computer contains a processor and at least one controller, which Kikinis also teaches (Fig. 1). It is taught in the prior art that a hardware implementation is functionally equivalent to the underlying method. Therefore, if claims 1, 2, and 4-6 are rejected, then claims 15, 16, and 18-20 are rejected as well.

12.   As for claim 22, Kikinis also teaches the at least one controller includes:

a.   Means for selecting a selected path for transmitting the out of band control command between the host computer and the device, the selected path being selected from among the multiple paths based upon a select6ion criteria that enables the selected path to be other than the target path identified by the out of band control command (col. 6, lines 19-32); and

b.   Means for transmitting the out of band control command between the host computer and the device over the selected path (col. 4, lines 61-64).

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

14.   Claims 1-6, 8-13, 15-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kikinis as applied to claims 1, 2, 4-6, 8, 9, 11-13, 15, 16, 18-20 and 22 above, and further in

view of Billings (5,684,956).

15.   For claims 1, 2, 4-6, 8, 9, 11-13, 15, 16, 18-20 and 22, that which is anticipated is

obvious.

16.   As for claim 3, Billings teaches that the multi-path system (see abstract) further includes

a second computer (Fig. 1, item 14) that is coupled to the data storage system (Fig. 1, item 12),

wherein the data storage system includes a shared storage region shared by the host computer

and the second computer (col. 1, line 61 – col. 2, line 3), wherein the target address specifies the

shared storage region (col. 8, lines 11-21), and wherein the transmission step includes a step of

transmitting the information between the host computer and the shared storage region over the

selected path (col. 2, line 65 – col. 3, line 10).

17.   Kikinis teaches that there are multiple "host" computers and that the hosts link to a

device that provides data to the hosts. Kikinis does not expressly disclose the nature of the user's

data request and thus does not disclose that there is a target address embedded in the system.

However, it is clear from Kikinis that the user can receive data from multiple channels,

necessitating some method of channel selection. Billings, in addition to teaching many of the above limitations, discloses further details regarding the data storage system and the methods of address selection. Because any type of server may be attached to the Kikinis Proxy-Server (col. 4, lines 4-25), the Billings data storage server may be attached as well. At the time the invention was made, one of ordinary skill in the art would have added the data server and addressing protocols to Kikinis in order to fill in implementation gaps and to provide the user with greater control over content selection.

18.   Claim 10 is drawn to a computer readable medium encoded with a program for execution on a host computer with similar limitations to those drawn in claim 3. It is taught in the prior art that the software implementation of a method is functionally equivalent to the underlying method. Official notice is also taken regarding the fact that a program would be stored on a computer readable medium and executed on a computer. Therefore, if claim 3 is rejected, then claim 10 is rejected as well.

19.   Claim 17 is drawn to a host computer that implements the method in claim 3. It is taught in the prior art that a hardware implementation is functionally equivalent to the underlying method. Therefore, if claim 3 is rejected, then claim 10 is rejected as well.

20.   Claims 7, 14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikinis as applied to claims 1, 8 and 15 above, and further in view of Downer et al. (6,434,656).

21.   For claim 7, Downer teaches that the path selection step includes a step of selecting the selected path based upon a state of previously assigned operations queued for transmission from the host computer to the device over the multiple paths (col. 2, lines 56-62).

22.   Kikinis teaches methods of path selections but does not disclose the method of providing a connection list. Downer teaches the use of a round robin selection in order to provide more efficient routing methods (col. 8, lines 47-50). At the time the invention was made, one of ordinary skill in the art would have used a predetermined round robin list to select the connection in Kikinis' path selection method in order to make the routing and fault handling more efficient.

23.   Claim 14 is drawn to a computer readable medium encoded with a program for execution on a host computer with similar limitations to those drawn in claim 7. It is taught in the prior art that the software implementation of a method is functionally equivalent to the underlying method. Official notice is also taken regarding the fact that a program would be stored on a computer readable medium and executed on a computer. Therefore, if claim 7 is rejected, then claim 14 is rejected as well.

24.   Claim 21 is drawn to a host computer that implements the method in claim 7. It is taught in the prior art that a hardware implementation is functionally equivalent to the underlying method. Therefore, if claim 7 is rejected, then claim 21 is rejected as well.

Conclusion

25.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

26.   Cases that teach aspects of "out of band" data access: Blackwell et al. (6,085,253), Law et al. (6,373,838), Bauman et al. (6,415,364).
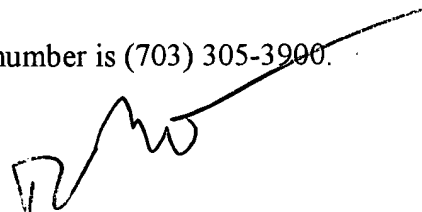
27.   Cases that teach aspects of "multiple paths to data servers, and fault tolerance thereof":

Hosokawa et al. (6,327,248), Shank et al. (6,145,028), Yasuda et al. (5,892,923), D'Errico

(6,216,202), Ballew et al. (4,577,272).

28.   Cases that teach remote data addressing issues: Stevens (6,336,177), Beardsley et al.

(6,170,023).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Melvin H Pollack whose telephone number is (703) 305-4641.

The examiner can normally be reached on 8-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mark H Rinehart can be reached on (703) 308-4815. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 746-7239 for regular

communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

MHP
August 16, 2002

ROBERT B. HARRELL
PRIMARY EXAMINER